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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,420	11/12/2003	Darin G. Schaeffer	8627/327	7610
757	7590	05/18/2006	EXAMINER	
BRINKS HOFER GILSON & LIONE			ZHENG, LOIS L	
P.O. BOX 10395			ART UNIT	
CHICAGO, IL 60610			PAPER NUMBER	

1742

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/712,420

Applicant(s)

SCHAEFFER, DARIN G.

Examiner

Lois Zheng

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 34-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-13, 15-22, 24-27 and 29-31 is/are rejected.
- 7) ☒ Claim(s) 9, 14, 23, 28, 32 and 33 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/1/04, 5/31/05.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-33, drawn to an apparatus, classified in class 204, subclass 242.
 - II. Claims 34-40, drawn to a method, classified in class 205, subclass 640.
2. Inventions II and I are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus as claimed can be used to practice another and materially difference process such as a process to polish a workpiece that is not an medical implant such as a stent.
3. Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Richard Stanley, Jr. in August 2005 a provisional election was made without traverse to prosecute the invention of I, claims 1-33. Affirmation of this election must be made by applicant in replying to this Office action. Claims 34-40 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3-7, 10-11, 13, 15, 18, 20-21, 24-25, 27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swain EP 1,369,099 A2(Swain) in view of Boulanger et al. US 4,132,618(Boulanger).

Swain teaches an apparatus for electro-polishing the inner surface of a stent(Fig. 2 numeral 2). The apparatus of Swain comprises a first member(Fig. 2 numeral 8) in contact with the inner surface of the stent and a second member(Fig. 2 numeral 7) spaced away from the first member. Swain further teaches that both the first and second members can be conductive(col. 7 lines 48-49) and the stent can be rotated(Fig. 6B).

Therefore, the first member inside the stent as taught by Swain reads on the claimed anode and the second member outside of the side as taught by Swain reads on the claimed cathode. In addition, the electrical contact between the anode and the stent in the electro-polishing apparatus of Swain continuously changes as an electrical voltage is applied across the anode.

However, Swain does not teach the claimed motor driven roller continuously rotate the stent as claimed.

Boulanger teaches an electrolytic device for marking metallic parts(abstract). Boulanger further teaches using a motor driven rollers(Fig. 1, numeral 9 and 12) to support and permit free rotation of the metal tube(Fig. 1 numeral 13).

Regarding claims 1 and 18, it would have been obvious to one of ordinary skill in the art to have incorporated the motor driven rollers as taught by Boulanger into the electro-polishing apparatus of Swain in order to permit free rotation of the metal tub as taught by Boulanger and also enable the implementation of both first and second conductive members(i.e. anode and cathode) in the apparatus of Swain.

Regarding claims 3-6, 15, 20-21, and 29, Swain's first member reads on the claimed anode/wire extending longitudinally through the cylindrical cavity of the stent and contacting the inner surface of the stent. In addition, Swain teaches that the stent diameter is 0.5mm to 2mm. Based on the figures of Swain, the first member of Swain has a diameter that is about $\frac{1}{4}$ of the diameter of the stent. Therefore, the figures of Swain inherently teach that the diameter of the anode is about 0.125-0.5mm, which meets the claim limitation of 75% or less than the inner diameter of the stent as recited in claim 6 and 29 and reads on the claimed 0.025in(i.e. 0.635mm) or less in diameter as taught by claim 21.

Regarding claim 7, the anode and the roller as taught by Swain in view of Boulanger are different elements as claimed.

Regarding claims 10-11 and 24-25, the instant claims recites the speed of roller rotation, which is a process limitation. The instant invention is drawn to an apparatus. As stated in MPEP 2114 [R-1], it is well settled that the manner in which a claimed

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apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus as long as the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). Therefore, the process limitations recited in claims 10-11 and 24-25 do not lend patentability to the instant apparatus claims.

Regarding claims 13 and 27, even though Swain in view of Boulanger do not explicitly teach the claimed roller being orientated at an angle, one of ordinary skill in the art would have found the claimed angled roller and obvious design choice since it is well settled that rearrangement of parts is an obvious matter of design choice. See MPEP 2144.04. In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950). In re Kuhle, 526 F.2d 553, 188 USPQ 7 (CCPA 1975).

7. Claims 2, 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swain in view of Boulanger, and further in view of Baker et al. US 3,935,085(Baker).

The teachings of Swain in view of Boulanger are discussed in paragraph 6 above. However, Swain in view of Boulanger do not teach the claimed amp-hour meter.

Baker teaches using an amp-hour meter in an electrochemical coating bath to sense the current passing between the anode and the cathode(col. 3 lines 15-20).

Therefore, it would have been obvious to one of ordinary skill in the art to have incorporated the amp-hour meter of Baker into the apparatus of Swain in view of Boulanger in order to monitor the current passing between the anode and the cathode as taught by Baker.

8. Claims 8 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swain in view of Boulanger, and further in view of Wang et al. US 6,275,826 B1(Wang).

The teachings of Swain in view of Boulanger are discussed in paragraph 6 above. However, Swain in view of Boulanger do not explicitly teach that the anode is made from platinum and the cathode is made from the same material as the stent.

Wang teaches an electro-polishing apparatus for polishing inner surface of stent (abstract). Wang teaches that Ni-Ti stents are more advantageous than stainless steel stents. Wang further teaches that suitable material for the anode is platinum and suitable material for cathode is Ni-Ti alloy(col. 3 lines 60-63, col. 4 lines 19-21).

Therefore, it would have been obvious to one of ordinary skill in the art to have incorporated the Pt anode and Ni-Ti alloy cathode as taught by Wang into the electro-polishing apparatus of Swain in view of Boulanger since Wang teaches Ni-Ti stents are better stents and Pt anode and Ni-Ti cathode are suitable anode and cathodes for electro-polishing Ni-Ti stents.

9. Claims 12, 16, 26 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swain in view of Boulanger, and further in view of Moore US 5,145,474(Moore).

The teachings of Swain in view of Boulanger are discussed in paragraph 6 above. However, Swain in view of Boulanger do not teach the roller grooves extending longitudinally as claimed.

Moore teaches a children's recreational globe comprising a rotatable globe with longitudinal grooves(Fig. 2 numeral 17).

Regarding claims 12 and 26, it would have been obvious to one of ordinary skill in the art to have incorporated the longitudinal grooves as taught by Moore into the roller in the apparatus of Swain in view of Boulanger in order to increase the friction and achieving better control of the rotation as taught by Moore(col. 4 lines 39-55).

Regarding claims 16 and 30, the instant claims are rejected for the same reasons as stated in the rejections of claims 6, 10, 12, 24, 26 and 29 above.

10. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Swain in view of Boulanger and Moore, and further in view of Baker.

The teachings of Swain in view of Boulanger and Moore are discussed in paragraph 9 above. However, Swain in view of Boulanger and Moore do not explicitly teach the claimed amp-hour meter.

The teachings of Baker are discussed in paragraph 7 above.

Therefore, it would have been obvious to one of ordinary skill in the art to have incorporated the amp-hour meter of Baker into the apparatus of Swain in view of Boulanger and Moore in order to monitor the current passing between the anode and the cathode as taught by Baker.

Allowable Subject Matter

11. Claims 9, 14, 23, 28 and 32-33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. Reasons for indicating allowable subject matter:

The prior art of record do not teach or suggest, either alone or in combination, the claimed electro-polishing apparatus having at least two cathode loops that are spaced apart from each other.

The prior art of record also do not teach or suggest, either alone or in combination, the claimed electro-polishing apparatus wherein the anode is attached to a swing arm, said swing arm adapted to lift the anode and the medical implant/stent out of an electrolytic bath while the roller and cathode remains immersed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lois Zheng whose telephone number is (571) 272-1248. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ROY KING 
SUPERVISORY PATENT EXAMINER
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